## REMARKS

The Examiner's comments have been carefully reviewed.

With regard to para. 1 of the Office Action, claim 3 has been amended to refer to 3-D space only as described on page 4, line 26 of the originally filed application.

Claims 1 to 27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Lemelson *et al.* (US 6,487,500). This rejection is respectfully traversed. In Lemelson, objects are detected from all directions by various sensors and data are computer processed and analyzed in neural networks on-board the vehicle to identify, rank, and evaluate collision hazards/objects allowing automatic control of the vehicle. Thus, Lemelson describes, for example:

> Outputs from multiple sensors as described above are used in onboard vehicle fuzzy logic/expert system computing algorithms to derive optimum vehicle warning and control signals designed to avoid or minimize the effect of vehicle collisions with other vehicles or with other objects or hazards that may be present on given roadways. In the preferred embodiment, fuzzy logic control algorithms are used to develop coordinated braking, acceleration and steering control signals to control individual vehicles in an optimal manner to avoid or minimize the effects of potential collisions. Video, radar/lidar and GPS position and trajectory information are made available to each individual vehicle describing the movement of that vehicle and other vehicles in the immediate vicinity of that vehicle. [col.14, lines 54-67]

The sensors may, for example, include motion sensors and transmitters embedded in highway as described at col. 25, lines 26-27. The sensors may further include a video camera that produces successive real-time video images of a route as the vehicle travels along the route and processes the images using fuzzy logic in order to determine obstacles. [See, for example, col. 22, line 49 *ff*]

Lemelson is discussed in the background section of the present invention and was known to the inventors. The inventors saw several drawbacks with such an approach that the present invention as claimed comes to solve. First, fuzzy logic processing of video images and other sensor outputs is demanding of high processing capability and the need for video sensors and the like may also be adversely affected by poor weather conditions that reduce visibility. Furthermore, to the extent that sensors must be built along the route and, as noted above, possibly embedded in the highway, Lemelson requires major alterations to the highway infrastructure and continuous maintenance thereof. Finally, sensors generally provide information only when a vehicle is on top of the sensor, which may be too late to take corrective action.

The invention as claimed does not require sensors disposed along the highway but rather provides a database of road signs that is used to anticipate an approaching hazard and forewarn the motorist well in advance thereof. These distinctions find expression in the original claims as filed. Thus, claim 1 recites:

> An in-vehicle system for tracking events that occur at specific locations of a transportation route and alerting a driver of an **impending significant event**;
>
> an event determination unit coupled to the location determination unit and responsive to the instantaneous location of the vehicle for communicating with an **events database for obtaining an impending event that the vehicle is about to confront** based on said instantaneous location; and
>
> a warning unit coupled to the decision module and responsive to at least one current parameter of the vehicle not being conducive to safe driving based on said impending event for **alerting the driver of the impending event**.

Similar limitations are recited in the independent method claim 22.

It is respectfully submitted that a sensor does not produce a signal that is indicative of an impending event: rather it produces a signal that depicts an actual event in real time. For example, Lemelson uses a video camera and processes the video images to determine hazard situations. It is clear that if a hazard situation is thus determined by Lemelson it is an actual event that occurs as the vehicle passes and not an impending event that may yet be avoided.

Lemelson does not employ a database of impending events and provides no motivation to do so. The Examiner has related to several features of the present invention that he considers are common to Lemelson but he makes no mention of the database that is claimed in the present invention and has no counterpart in Lemelson. This, as noted, is the essence of the present invention and provides significant advantages over Lemelson, such as reduced processing resources; avoiding the need to modify existing infrastructure; the ability to update the database centrally without any need to alter the highway infrastructure; the ability to anticipate hazards well ahead of schedule and provide adequate warning to the motorist; avoiding the dependence on good visibility.

In view of the foregoing, it is believed that independent claims 1 and 22 are patentably distinguished over Lemelson. The subsidiary claims are likewise believed to be patentable by virtue of their being dependent on allowable base claims.

Favorable reconsideration is requested.

## CONCLUSION

In light of the foregoing, Applicants submit that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicants respectfully request that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

In the event this paper is not timely filed, Applicants petition for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 14-0112.

Respectfully submitted,
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